

WHAT IS CLAIMED IS:

1. A fuel cell power plant comprising:

a fuel tank storing liquid fuel;

a vaporizer vaporizing liquid fuel in the fuel tank;

a reformer generating a reformat gas containing hydrogen from gaseous fuel supplied from the vaporizer;

a fuel cell stack operated by the reformat gas;

a first valve cutting off supply of gaseous fuel to the reformer from the vaporizer;

a recovery passage returning gaseous fuel in the vaporizer to the fuel tank;

and

a second valve cutting off the recovery passage.

2. The fuel cell power plant as defined in Claim 1, wherein the fuel cell power plant further comprises a gaseous fuel supply passage connecting the vaporizer and the reformer, the first valve is provided in the gaseous fuel supply passage, and the recovery passage is connected through the second valve to the gaseous fuel supply passage between the vaporizer and the first valve.

3. The fuel cell power plant as defined in Claim 1, wherein the liquid fuel contains a mixture of methanol and water, and the fuel cell power plant further comprises a methanol valve supplying methanol to the fuel tank, a water valve supplying water to the fuel tank, a sensor detecting a methanol concentration in the fuel tank and a controller functioning to open and close the methanol valve and the

water valve respectively to cause the methanol concentration to coincide with a predetermined target value.

4. The fuel cell power plant as defined in Claim 1, wherein the fuel cell power plant further comprises a water tank storing water, a second vaporizer vaporizing water in the water tank and supplying the vaporized water to the reformer, a third valve cutting off water vapor from the second vaporizer to the reformer, a second recovery passage returning water vapor in the second vaporizer to the water tank, and a fourth valve cutting off the second recovery passage.

5. The fuel cell power plant as defined in Claim 1, wherein the second valve comprises a relief valve which opens when a pressure of gaseous fuel in the vaporizer exceeds a set pressure.

6. The fuel cell power plant as defined in Claim 1, wherein the fuel cell power plant further comprises a condenser condensing gaseous fuel in the recovery passage.

7. The fuel cell power plant as defined in Claim 1, wherein the fuel cell stack is connected to an electrical load, and the fuel cell power plant further comprises a sensor which detects a current supply amount from the fuel cell stack to the electrical load, and a controller functioning to close the first valve and open the second valve when the current supply amount has become lower than a predetermined amount.